REMARKS

Claims 1-17 are currently pending in the application, of which claims 1, 4 and 6 are independent claims. The Office Action indicates that claims 4 and 5 are allowed.

In view of the following Remarks, Applicant respectfully requests reconsideration and timely withdrawal of the pending rejections for the reasons discussed below.

Rejections Under 35 U.S.C. §103

Claims 1-3 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U. S. Patent No. 6,498,696 issued to Nakamura, *et al.* ("Nakamura") in view of U. S. Patent No. 5,283,477 issued to Shibata ("Shibata"). Applicant respectfully traverses this rejection for at least the following reasons.

In the Office Action, the Examiner stated "A first D/A converter is detailed in figure 50 ... By referring to figure 29D it can be seen that the second DAC (item 10C) receives the analog gradation from (item 80) ..." (Office Action, page 2). This assertion is respectfully disagreed with.

Independent claim 1 recites:

> "1. A flat panel display, comprising:
> a power unit generating a constant voltage;
> a gate voltage generating unit generating a gate on/off voltage;
> a controller receiving driving data and a driving control signal and generating a scan control signal, a column control signal, *RGB data and digital gamma data* having a plurality of gradation values;
> a scan driver unit receiving the scan control signal and the gate on/off voltage and generating a scan signal;
> a column driver unit converting *the digital gamma data into an analog gradation voltage* and generating a column signal

based on the column control signal, the RGB data and the analog gradation voltage, the column driver unit comprising:

a first D/A converter converting the digital gamma data into an analog gradation voltage; and

a second D/A converter receiving the analog gradation voltage from the first D/A converter and *the RGB data* from the data latch, selecting the gradation value corresponding to the RGB data from the data latch and generating a gradation voltage based on the selecting gradation value; and

a flat display panel displaying an image based on the scan signal and the column signal."

According to claim 1, the controller generates *digital gamma data having a plurality of gradation values*, and the first D/A converter converts the digital gamma data into an analog gradation voltage. Also, the second D/A converter receives the gradation voltage (converted to analog by the first D/A converter) and the RGB data, which is different from the digital gamma data.

In this regard, Fig. 50 of Nakamura shows 6 bit digital RGB data (d1, d2, d3, d4, d5 and d6) provided to the gamma correction circuit 80 for gamma correction. The decoder in the gamma correction circuit 80 uses the most significant three bits d1, d2 and d3 of the digital RGB data to select one of the reference potentials V1 to V9 for gamma correction. The selected reference potential and the least significant three bits d4, d5 and d6 of the digital RGB data are sent to the D/A converter 10C to generate an analog potential for each data line 27. Thus, the RGB data is also used for gamma correction in Nakamura.

In this regard, As mentioned above, claim 1 recites that the RGB data and the digital gamma data having a plurality of gradation values are two different data. Also, the digital gamma data is transferred to the first D/A converter, and the RGB data is transferred to the second D/A converter.

Since, in Nakamura, the most significant three bits of the digital RGB signal are used for gamma correction, Nakamura fails to disclose or suggest the RGB data being different from digital gamma data having a plurality of gradation values, as recited in claim 1. Thus, it would be *impossible* for Nakamura to disclose or suggest the 6 bit digital RGB signal and digital gamma data having a plurality of gradation values being transferred to two different D/A converters, respectively, as recited in claim 1.

The secondary reference to Shibata discloses a driver circuitry for a common electrode but fails to cure the deficiency of Nakamura. Since none of the cited references discloses or suggests these claimed features, it is submitted that claim 1 is patentable over them. Claims 2 and 3 are dependent from claim 1 and would be also patentable at least for the same reasons.

Accordingly, Applicant respectfully requests withdrawal of the 35 U.S.C. §103(a) rejection of claims 1-3.

Claims 6-17 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Nakamura in view of Applicant's own admission and further in view of U. S. Patent No. 6,480,180 to Moon ("Moon"). This rejection is respectfully traversed at least for the following reasons.

Independent claim 6 recites:

> "6. A flat panel display, comprising:
> a power unit generating a constant voltage;
> a gate voltage generating unit generating a gate on/off voltage;
> a controller receiving driving data and a driving control signal and generating a scan control signal, a column control signal, RGB data and digital gamma data having a plurality of gradation values with reference to the constant voltage from the

> power unit, wherein *the controller encodes the scan control signal, the column control signal, the RGB data in a differential signal format*;
>
> a scan driver unit decoding the differential signal and generating a scan signal based on the scan control signal and the gate on/off voltage;
>
> a column driver unit decoding the differential signal, converting the digital gamma data into an analog gradation voltage, and outputting a column signal based on the column control signal, RGB data and the analog gradation voltage; and
>
> a flat display panel displaying an image based on the scan signal and the column signal."

Thus, according to claim 6, the controller encodes the RGB data in a differential signal format and transferred to the column driver, but does not encode the digital gamma data in the differential signal format. An example of this claimed feature is shown in Fig. 7, in which the RGB data is transferred to the RSDS transmitting unit 64 while the gamma data is *not* transferred to the RSDS transmitting unit 64. This is only possible when the RGB data and the digital gamma data are two different signals.

As mentioned above, in Nakamura, the most significant three bits of the digital RGB signal are used for gamma correction. Thus, even if Nakamura is combined with Applicant's own admission and Moon, it would be *impossible* for them to disclose or suggest separating the most significant three bits of the 6 bit digital RGB data of Nakamura from the 6 bit digital RGB data itself and only encoding the most significant three bits of the 6 bit digital RGB data in a differential signal format. If 6 bit RGB data were encoded in a differential signal format, the most significant three bits of the RGB data would be also automatically encoded in the same differential signal format.

Thus, it is submitted that the asserted combination of the cited references fails to disclose or suggest encoding the RGB data in a differential signal format while the digital gamma data is

not encoded in the differential signal format, as recited in claim 6. For these reasons, it is submitted that claim 6 is patentable over them. Claims 7-17 are dependent from claim 6 and would be also patentable at least for the same reasons.

Accordingly, Applicant respectfully requests withdrawal of the 35 U.S.C. §103(a) rejection of claims 6-17.

CONCLUSION

Applicant believes that a full and complete response has been made to the pending Office Action and respectfully submit that all of the stated grounds for rejection have been overcome or rendered moot. Accordingly, Applicant respectfully submits that all pending claims are allowable and that the application is in condition for allowance.

Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact the Applicant's undersigned representative at the number below to expedite prosecution.

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,

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Date: April 1, 2005

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